



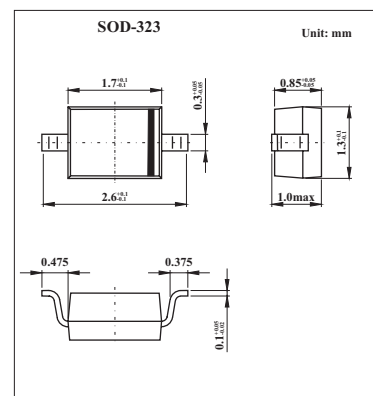
**THE DATASHEET OF
1N4148WS**



FAST SWITCHING DIODES

■ Features

- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance



■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Non-repetitive peak reverse voltage	V_{RM}	100	V
Peak repetitive reverse voltage	V_{RRM}	75	V
Working peak reverse voltage	V_{RWM}		
DC blocking voltage	V_R		
RMS reverse voltage	$V_{R(RMS)}$	53	V
Average rectified output current	I_O	150	mA
Forward continuous current	I_{FM}	300	mA
Non-repetitive peak forward surge current @ $t = 1.0\text{s}$ @ $t = 1.0\ \mu\text{s}$	I_{FSM}	1.0 2.0	A
Power dissipation *	P_D	350	mW
Typical thermal resistance, junction to ambient air*	$R_{\theta JA}$	625	K/W
Operating and storage temperature range	T_j, T_{stg}	-65 to +150	$^\circ\text{C}$

* Part mounted on FR-4 PC board with recommended pad layout,

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 1.0\ \mu\text{A}$	75			V
Forward voltage	V_{FM}	$I_F = 10\text{mA}$			0.715	V
		$I_F = 10\text{mA}$			0.855	
		$I_F = 50\text{mA}$			1.0	
		$I_F = 150\text{mA}$			1.25	
Peak reverse current	I_{RM}	$V_R = 75\text{V}$			1.0	μA
		$V_R = 75\text{V}, T_j = 150^\circ\text{C}$			50	
		$V_R = 25\text{V}, T_j = 150^\circ\text{C}$			30	nA
		$V_R = 20\text{V}$			25	
Capacitance	C_T	$V_R = 0, f = 1.0\text{MHz}$			2.0	pF
Reverse recovery time	t_{rr}	$I_F = I_R = 10\text{mA}, I_{rr} = 0.1 \times I_R, R_L = 100\ \Omega$			4.0	ns

■ Typical Characteristics

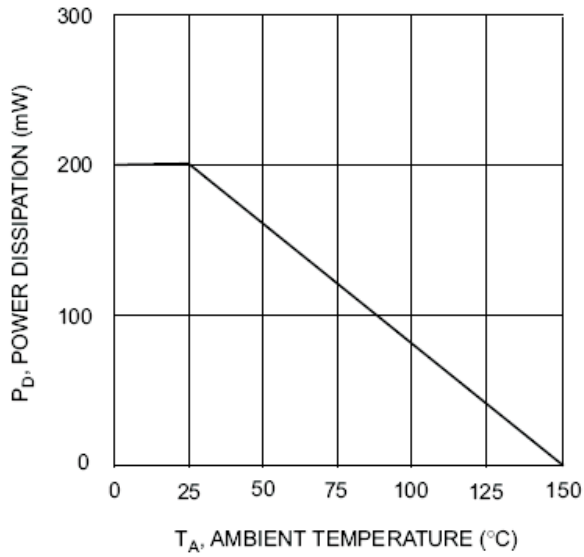


Fig.1 Power Derating Curve

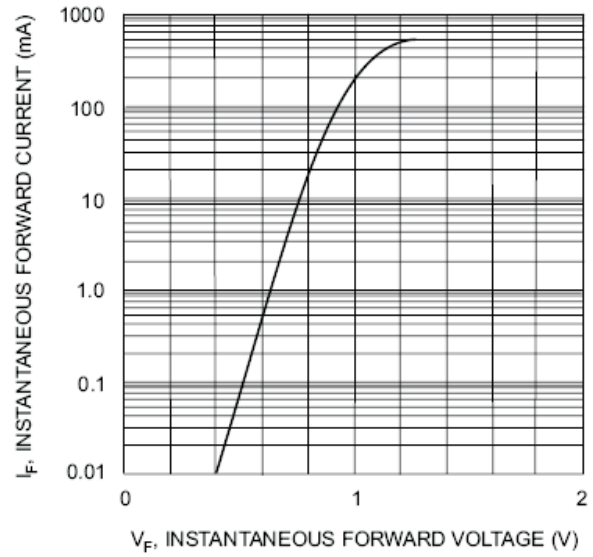


Fig.2 Forward Characteristics

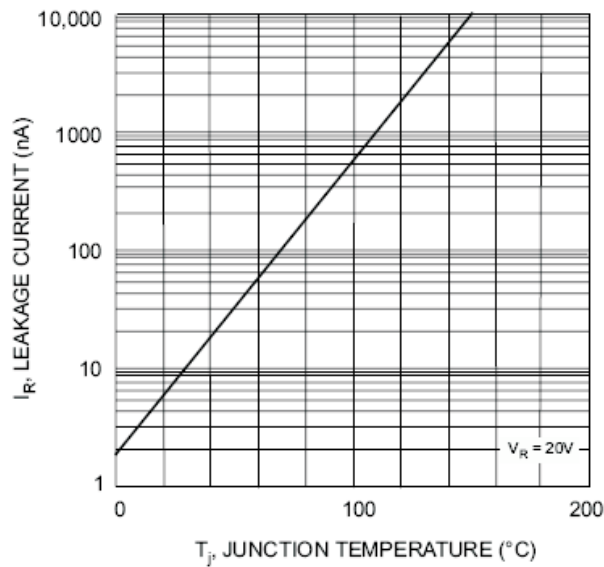


Fig. 3 Leakage Current vs Junction Temperature

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